What is claimed is:

1. A longitudinally coupled resonator-type surface acoustic wave filter comprising:

a piezoelectric substrate; and

at least three IDTs arranged on said piezoelectric substrate along the propagation direction of the surface acoustic wave, each having a plurality of electrode fingers;

wherein, in at least one of the at least three IDTs, the electrode finger period of a first portion that is adjacent to the side edge of another of the IDTs in the propagation direction of the surface acoustic wave is different from the electrode finger period of a second portion that is the remaining portion of said at least one of the IDTs, the wavelengths of the surface acoustic waves determined by the electrode finger periods of said first portion and said second portion being $\lambda I1$ and $\lambda I2$, respectively.

2. A longitudinally coupled resonator-type surface acoustic wave filter according to Claim 1, wherein the electrode finger period of said first portion is shorter than the electrode finger period of said second portion.

3. A longitudinally coupled resonator-type surface acoustic wave filter according to Claim 2, wherein the electrode finger period of said first portion is about 0.82 to about 0.99 times the electrode finger period of said second portion.

4. A longitudinally coupled resonator-type surface acoustic wave filter according to Claim 1, wherein both of a pair of the IDTs which are adjacent to each other are arranged so that the electrode finger period of said first portion is different from the electrode finger period of said second

portion, and a center distance between adjacent electrode fingers of said pair of adjacent IDTs is substantially equal to $0.5\lambda I1$.

5. A longitudinally coupled resonator-type surface acoustic wave filter according to Claim 1, wherein only one of a pair of the IDTs which are adjacent to each other is arranged so that the electrode finger period of said first portion is different from the electrode finger period of said second portion, and the center distance between adjacent electrode fingers of said pair of adjacent IDTs is substantially equal to $0.25\lambda I1 + 0.25\lambda I2$.

6. A longitudinally coupled resonator-type surface acoustic wave filter according to Claim 1, wherein in the IDT in which the electrode finger period of said first portion is different from the electrode finger period of said second portion, the center distance between the electrode fingers of said first portion and the electrode fingers of said second portion is substantially equal to $0.25\ \lambda I1 + 0.25\ \lambda I2$ in a portion in which the electrode fingers of said first portion and the electrode fingers of said second portion are adjacent to each other.

7. A longitudinally coupled resonator-type surface acoustic wave filter according to Claim 1, wherein the polarity of the electrode fingers adjacent to each other of the IDT including said first portion and said second portion and the polarity of the electrode fingers of the IDT adjacent to said IDT are different.

8. A longitudinally coupled resonator-type surface acoustic wave filter according to Claim 1, wherein the total

number of electrode fingers of said first portion is not more than 18 on both sides of the adjacent parts of a pair of the IDTs which are adjacent to each other.

9. A longitudinally coupled resonator-type surface acoustic wave filter according to Claim 1, wherein the center distance between the electrode fingers, having periods that are not different, of a pair of the IDTs which are adjacent to each other is $(0.08 + 0.5n)\lambda I2$ to $(0.24 + 0.5n)\lambda I2$ (n= 1, 2, 3, ...).

10. A longitudinally coupled resonator-type surface acoustic wave filter according to Claim 1, wherein the center distance between the electrode fingers, having periods that are not different, of a pair of the IDTs which are adjacent to each other is $(0.13 + 0.5n)\lambda I2$ to $(0.23 + 0.5n)\lambda I2$ (n= 1, 2, 3, ...).

11. A longitudinally coupled resonator-type surface acoustic wave filter according to Claim 1, wherein both of a pair of the IDTs, which are adjacent to each other in the propagation direction of the surface acoustic wave filter, include the first portion and the second portion, and the numbers of electrode fingers of the first portions of both IDTs are different.

12. A longitudinally coupled resonator-type surface acoustic wave filter according to Claim 1, wherein said piezoelectric substrate is obtained by rotating a $LiTaO_3$ single crystal in the direction of the Y axis in the range of approximately 36 to approximately 44 degrees with respect to the X axis.

13. A longitudinally coupled resonator-type surface acoustic wave filter according to Claim 1, wherein the film thickness of the electrode fingers of said first portion is different from the film thickness of the electrode fingers of said second portion.

14. A longitudinally coupled resonator-type surface acoustic wave filter according to Claim 13, wherein the film thickness of the electrode fingers of said first portion is thinner than the film thickness of the electrode fingers of said second portion.

15. A longitudinally coupled resonator-type surface acoustic wave filter according to Claim 1, wherein the electrode fingers of said first portion include a split electrode.

16. A longitudinally coupled resonator-type surface acoustic wave filter comprising longitudinally coupled resonator-type surface acoustic wave filters according to Claim 1 arranged to define at least a two-stage vertical connection.

17. A longitudinally coupled resonator-type surface acoustic wave filter according to Claim 16, wherein the electrode finger period of said first portion of at least one stage of the multiple-stage longitudinally coupled resonator-type surface acoustic wave filter is different from the electrode finger period of said first portion of another stage thereof.

18. A longitudinally coupled resonator-type surface acoustic wave filter according to Claim 17, wherein the

electrode finger period of said first portion is different in each stage of the multiple-stage longitudinally coupled resonator-type surface acoustic wave filter.

19. A longitudinally coupled resonator-type surface acoustic wave filter according to Claim 1, wherein at least one series resonator and/or parallel resonator is connected to an input side and/or output side.

20. A longitudinally coupled resonator-type surface acoustic wave filter according to Claim 1, wherein the filter is constructed so as to have a balanced-unbalanced input/output.

21. A longitudinally coupled resonator-type surface acoustic wave filter according to Claim 1, wherein the filter is constructed so as to have a balanced-balanced input/output.

22. A communication apparatus comprising a longitudinally coupled resonator-type surface acoustic wave filter according to Claim 1 defining a band-pass filter.